DOCUMENT RESUME

ED 330 634 SO 030 454

AUTHOR Breiter, Joan C.
TITLE Using a Multi-Text/Cooperative Learning Approach in a Methods Course. Part I.
INSTITUTION Iowa State Univ. of Science and Technology, Ames. Research Inst. for Studies in Education.
PUB DATE 90
NOTE 75p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Cooperative Learning; Curriculum Development; Educational Research; Elementary Education; Elementary School Teachers; Higher Education; *Methods Courses; *Preservice Teacher Education; *Social Studies; Student Reaction; Teacher Education; Teacher Education Curriculum; *Teacher Education Programs; Teaching Methods
IDENTIFIERS *Multitext Approach

ABSTRACT

The introduction of the use of multiple texts and cooperative learning in a social studies methods course for preservice teachers is reported. The project was implemented over two semesters and one summer session. Revisions and refinements were made after each semester on the basis of student feedback. In general, cooperative learning was better accepted than the use of multiple texts. Students seemed wary of having to use the reserve library and to make decisions about what was important about the topics for which multiple texts were used. Improvement followed after revisions to this aspect of the course were made, and improvements continued to be made that resulted in more positive student reception of multiple texts. Cooperative learning, though well accepted, needed to be incorporated into the class more than the instructor initially planned. The major revision in this part of the project involved building in more, short, cooperative learning group work with selected course topics that allowed students to practice the process. Both the cooperative learning and multitext aspects of the course continue to be studied to improve student acceptance, satisfaction, and realization of the value of these strategies in the preparation of elementary teachers. (Author/DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED330634

Using A Multi-text/Cooperative Learning Approach in a Methods Course

Joan C. Breiter

Iowa State University

Elementary Education

Research Institute for

Studies in Education

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

JOAN BREITER

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SO 030 454

Running head: MT/CL APPROACH

Part I

Using A Multi-text/Cooperative Learning Approach in a Methods Course

Introduction

This project began in 1987-88 when the researcher determined a need for an updating of the elementary level social studies methods course. This overall revision attempted to make students more responsible for their learning, to utilize additional techniques students will need to use in their own (future) classrooms, and to provide exposure to selected techniques recently recommended for use across the curriculum.

Three related factors were identified as key to the project.

1. The implementation of a multiple-text (MT)/cooperative learning (CL) approach in an elementary social studies methods course.
2. The measurement of student interest in implementing the approach in their future classrooms.
3. The satisfaction level of the methods students with the MT/CL experiences within the course structure.

Research pertinent to these techniques was identified. While the use of multiple texts has been commonly used, especially in upper grade levels for many years, the cooperative learning facet of the project has only recently been a focus in education. Some helpful and current information about the

philosophy and variations of this method may be found in the November 1987 issue of Educational Leadership. Of most interest are the following articles in that issue: "Training Teachers for Cooperative Learning" by Yack and Shloma Sharon, "Research Shows the Benefits of Adult Cooperative Learning" by David W. and Roger T. Johnson, and "Cooperative Learning and the Cooperative School," by Robert E. Slavin. These articles make a strong case for using cooperative learning with a variety of age levels in a variety of settings. Another source of information is "The New Cooperative Learning" by Tom Bernagozzi which was published in the February issue of Learning '88 (pp. 38-43). Since 1988, the literature in cooperative learning has proliferated, and training in this approach is available for teachers through several agencies. Linda Munger, ISU graduate student who is a cooperative learning expert, trains teachers all over Iowa. She has introduced cooperative learning to the social studies methods students and to students in other education courses. The researcher's previous work with multiple texts with elementary children is also a personal source of information for this aspect of the study.

For those who are unfamiliar with cooperative learning, it may briefly be defined as follows: Cooperative learning is a learning situation which stresses 5 basic elements (positive interdependence, face-to-face interaction, individual

accountability, use of interpersonal and small group skills, and processing, i.e. analyzing) to help all group members experience a people-help-people situation rather than a competitive situation in school work. Students can reach their learning goals only if all others in the group also reach their goals. Students work together to accomplish shared goals (Johnson, Johnson and Holuber, p. 4, 1986).

Overview

As with any project, considerable time and preparatory work was needed to develop, obtain, and pilot materials for student and instructor use. These activities occurred during the 1987-88 academic year. The following materials had been developed and were ready for use during Fall 1989.

1. Packet of materials for student use.
2. Set of quizzes over selected topics.
3. Set of major exams.
4. Course evaluation materials.
5. Multiple copies of methods texts for student use which were placed in the Reserve Library and the instructor's office.
6. Revised class schedule and requirements.

Several changes were initiated to maximize the MT/CL aspects of the methods course. Firstly, students were made responsible for developing their own "personal" text (PT). Selected topics were to be included in this text. Students were to select material from three different texts for each topic. Included in the student packet materials was a chart identifying where in each book information could be found on each topic. Students could copy and highlight or annotate, take handwritten notes, or use a combination of these approaches for their chosen material. Guidelines for this activity were provided in the packet and demonstrated in class. The personal texts were submitted for evaluation (possibility of 3 points per topic) at specified times. The personal texts were to be used during selected group discussions, including some cooperative learning group work. Frequent quizzes were used to determine the extent of student exposure to specific types of information about the multiple-text (MT) topics, and to encourage them to be ready to contribute to class discussions.

Secondly, the cooperative learning (CL) aspect of the project was introduced by our local expert, Linda Munger, to both classes. Mrs. Munger spent a class period with each group after I had pretested their knowledge of CL, and shared this information with her. Their knowledge was reinforced by a practice/review session conducted by the regular instructor, a

post test, and feedback from students regarding concerns and/or questions they had. Mrs. Munger returned for part of a class period to address their concerns and questions. Students were then requested to use aspects of this technique in several group activities throughout the term.

At the end of the semester, students were asked for feedback on all aspects of the course with special emphasis on the materials and experiences connected with the use of multi-text and cooperative learning.

As a result of student feedback (to be analyzed later in this report), changes were made for Spring 1990. (Feedback regarding these aspects of the project will be analyzed during Summer 1990, and added to this report when completed.)

1. The number of different sources to be consulted for each topic in the PT was dropped from three to two.
2. Further guidance was given as to how to select the material and organize it. Students were required to hand in the first MT topic in their personal text within a week of when it was presented. Both individual and full class feedback from the instructor resulted in better personal text material choices and organization. It is hoped that course evaluation will also show a better understanding of how the PT can be a useful resource during student teaching.

3. The quizzes were dropped, or used as a focus for discussion of specifics in class. Despite the efforts to select material common to many of the text authors, students found them too frustrating i.e., too focused on specific facts rather than concepts.
4. The major exams were successful. Some items have been rewritten, a few excluded, and some new material added. Students appreciated the opportunity to select questions to answer from a group of "equally important" questions, thus hand-tailoring the exam to their strengths. (Students were required to select enough questions to earn a specified number of points, with the option of going beyond the minimum.) One or two questions, selected by the instructor, were to be answered by all students.
5. More work with cooperative learning was planned, and a collection of articles by both researchers and classroom teachers developed for use by students. The response of many students to CL indicated they needed more "proof" that students of varying ability levels could profit from this technique. They also felt the need for more experience with the technique, and to understand they may need to seek additional training in this area. In part, additional exercises/discussions using CL were

planned to meet these expressed needs.

6. Revision of some packet material and the addition of new material was implemented.

Analyses of Data

Data of several kinds was collected from the sample population (two sections of El. Ed. 443) during Fall Semester 1990. The next part of this report will discuss what was learned about the success/failure of the MT/CL approach, as used in this course, as a result of the analysis of data.

The analysis of data was based on the following items. The sample population consisted of the two sections (1 and 2) the researcher taught during Fall 1990.

1. A pre-post test over 10 topics selected to be studied using a multi-text approach was administered the first or second class meeting. Two of these topics (global education and career education) were the target topics (for later analysis).
2. This same test was administered near the end of the term, with the same two topics targeted for later analysis.
3. The pre-post test yielded 2 scores; the first score came from the objective test items and the second from pre-determined criteria applied to student answers.

4. A Likert instrument dealing with the positive/negative feelings students have towards (a) using this approach in a college methods class and (b) their interest in trying a modification of the approach in elementary classrooms was administered.

The data analysis utilized objectives and short answer pre-post test scores and the attitude instrument called the satisfaction scale in the discussion.

a. A paired t-test was used to analyze the pre-post scores of the students, both the objective and scored short answer section. Students were matched to their scores and section. These tests were run on both sections as one group and as separate groups.

b. The Likert instrument (perception/attitude) was analyzed using an independent t-test both between the two sections and each section independently.

c. Descriptive statistics (such as percentages) were used with the perception data, and the pre-post tests (frequency data).

Frequency Data Analysis

Fifty-five students participated in this study; twenty-eight were in Section One and twenty-seven in Section Two. The composition of these classes, shown in Table 1, indicate a

preponderance of females in the sample (which, however, reflects the overall student enrollment in elementary education, as well as a preponderance of upper classpersons. Students often enroll in methods courses close to their senior year student teaching term.)

Insert Table 1 about here

The first analysis of data looked at student performance on pre and post test scores on the two topics selected for experimentation (MT/CL) - global education and career education. Section One learned about global education through a traditional (lecture-discussion) approach. Section Two learned about global education through the experimental approach (CL) which also required students to draw upon the material they selected for their personal texts.

Similarly, the topic of career education was presented to Section One using the CL learning technique with emphasis on personal text material while Section Two learned about career education through the traditional approach. Table 2 indicates this arrangement.

Insert Table 2 about here

The global education pre-post test which was administered to all students in the sample population consisted of a ten-point objective selection and a five-point short answer (subjective) section.

An examination of the frequency data shows the lowest total score on the objective section of the pre and post tests was 3 of 10 points (both sections) and the highest score on the pre and post test scores was 8 of 10 points.

Table 3 indicates the values, frequency and means of each group on the global education objective pre and post tests.

Insert Table 3 about here

As expected, the scores on this test section improved after study. The spread of scores is similar between the groups on the pre test, but much wider for Section Two on the post test. The lowest score in Section One on the post test was 6 of 10 possible points. The highest score for Section Two was a "perfect" score by one individual. The means indicate an approximate difference of .5 points (favoring Section One) on the pre test and a .35 point difference (favoring Section One) on the post test. Section One, as noted earlier, received the CL (experimental) approach on this topic.

Table 4 is devoted to a similar comparison of the values,

frequencies and means of the two classes on the other target topic - career education. Section Two experienced the topic through the experimental (CL) approach, and Section One experienced the topic through the traditional approach.

Insert Table 4 about here

Once again, the mean score for Section One was higher (.59 point) than that of Section Two. However, the mean on the objective post test favored Section Two, the section experiencing the topic through the CL (experimental) approach.

Both sections also took a five-point pre and post test in short answer form over global education and career education. There were five essay questions on each topic. Table 5 summarizes the frequency-based information regarding these test scores.

Insert Table 5 about here

As can be seen from the means recorded in Table 5, both groups made gains on the short answer tests. Referring to Table 2 reminds the reader that the experimental approach was used with Section One for global education and Section Two for career education. In each case, the section taught using the

experimental approach made the greater gain.

The final set of data considered by examining frequency information concerns the pre and post test scores in the area of cooperative learning (CL). Table 6 presents the values, frequencies, and means for this five question (25 points) short answer essay exam. A copy of the instrument may be found in Appendix _____.

Insert Table 6 about here

Neither group scored particularly well on the questions in the cooperative learning pre test. (There was, however, informal interest in the topic, and a recognition that they (the students) need to be familiar with cooperative learning for their student teaching experience.) Improvement was dramatic, however, when the pre and post test means are examined. The fact that the students have some in-school experiences prior to student teaching during which cooperative learning may have been observed or talked about probably has some impact on the level of information and motivation of students. Also, the individual who came into our classes to work with the students on cooperative learning was very knowledgeable about cooperative learning, and was a highly effective teacher. These two factors, plus the fact that she met with them a second time after the researcher had

extended their experience and solicited questions/concerns students still had about CL, were bound to have an effect on the reactions of the students to the technique.

Frequency data was recorded for the combined (Section One and Section Two) sample population. Of the fifty-five participants twenty percent were juniors and eighty percent were seniors. Eighty-nine percent were female and 11% were male. Table 7 indicates the pre and post test scores in terms of means re the global education, career education and cooperative learning topics. The combined group did show improvements on all post tests over the pre test scores, regardless of how the topic was taught.

Insert Table 7 about here

To summarize the information about the MT/CL approach as experienced by the sample population, several observations may be made.

1. Students showed an improvement in their level of knowledge on all topics selected for testing, no matter which approach (MT/CL or Traditional) was used.
2. Students exposed to a topic through the MT/CL approach scored better than the group using the traditional approach.

3. Further analysis is needed to determine if the improvements in scores when the MT/CL approach was used are significant at the .05 level of probability.

T-Test Analysis of Data

The second part of the statistical analysis of data employed the use of paired t-tests to analyze the pre and post test scores of students on both the objective and short answer tests. Students were matched as to their scores and section; the analysis applied to each section separately and to the combined group.

Table 8 presents this data. The determination of whether the differences between the means for each pair of pre and post tests is made on the basis of a 0.05 level of probability.

Insert Table 8 about here

All t-tests indicated the difference between means were due to methods other than chance (0.05 level of probability). In order to take a closer look at these results, the t-tests were run a second time, this time separately for Section One and Section Two.

As can be seen in Table 9, analyzing the data from each section separately did not change the general outcome. In all

cases, the differences between the means was significant at the 0.05 level of probability.

Insert Table 9 about here

At this point, it might be helpful to look at the differences between means relative to the teaching technique used. Section One experienced global education through the experimental (MT/CL) approach and Section Two experienced career education through the experimental approach. Each experienced the traditional with the "other" topic.

Insert Table 10 about here

The differences between means send a mixed signal when examining the global education data. The difference between means for Section Two, which experienced the topic through the traditional approach, was somewhat higher than that for Section One, but the differences between means for the Short Answer test on global education favored Section One. The section with which the traditional approach was used did better with objective test questions, but not as well on short answer (open-ended) test questions.

A similar review of career education pre and post test mean

differences shows the section (Section Two) experiencing the topic through the experimental approach had a greater difference between means than did Section One. The difference between means for the Short Answer test, however, was very small (0.99).

The last data to be analyzed came from a Likert-type instrument of six (6) items concerning student satisfaction with the experimental aspects of the course (use of multiple-texts and an introduction to cooperative learning), and their overall feeling of readiness to teach social studies. Tables 11-16 show the frequency data for these six items. (A copy of the instrument is in Appendix A.) As you look over the frequency data, please note that Strongly Agree is labeled 1 (one) on the Likert scale while Strongly Disagree is labeled 5 (five). Mean ratings close to one (1), therefore, indicate agreement while those close to give (5) indicate disagreement.

The first three items focus on the multi-text (MT) approach. Student responses to these items ranged from neutral to strongly disagree. As a result of these ratings, which were visually inspected before analysis of data was conducted, and informal conferences with students, changes were made in the multi-text component of the course for the Spring 1990 semester. Students will rate this component again at the end of the Spring term. (Their responses will be reported separately from this report.) It is anticipated the changes made will have helped students

recognize the value of using multiple-texts, and that they will report more favorable attitudes to this approach than did Fall 1989 semester students.

Tables 11 through 13 indicate the frequency data associated with the multi-text approach aspect of the course. Table 13 shows the least negative response within the first three items, as the means were in the neutral area, rather than clearly disagreeing.

The next two items (#4 and #5) asked students to consider the cooperative learning experiences they had in class, both as to the level of understanding of the technique and the competency level they felt they had attained as a result of these experiences.

Students were much more positive about the cooperative learning aspect of the course than the multi-text aspect. These experiences have also been presented to students during the Spring term in a similar manner using combination of Linda Meyer's expertise and instructor follow-up and extension. Some minor changes were made on the basis of student feedback. Spring semester students will also respond to these items, and the results discussed in the separate report mentioned earlier.

Tables 14 and 15 present the frequency data on the cooperative learning items. Students appear to be somewhere between positive and neutral about their ability to implement CL

in their future classroom (Table 15). Comments related to this item indicated students felt the need for additional training. Since the CL experiences were intended as an introduction to this area, the results were not surprising. They, however, did largely agree they understood the concept of CL (Table 14).

The final item in the "satisfaction" scale asked students how they felt about their ability to teach social studies as a result of their social studies methods course. It is interesting to note that over 66% of the students agreed they felt ready to do so, and another 20% felt neutral about their readiness. Feelings of disagreement were also about 20% of the responses. This result was anticipated by the researcher as the experimental semester unfolded and the changes discussed earlier directly resulted from this anticipation. It, however, should be noted that written student comments provided insights that went beyond the number ratings. These insights were especially helpful in revising materials and requirements. Table 16 indicates the frequency data related to this item. Section One was more positive about the course than Section Two, but both means were on the positive "side" of the scale.

Although the informal comments of students were not formally analyzed, several factors seemed to affect their satisfaction level relative to all six (6) items. They included: willingness to accept more responsibility for their own learning, needing to

use the library on a consistent basis and not wanting to do so, commuting, working 20 or more hours a week, carrying an overload of courses, taking several courses which require more than taking in-class notes and passing tests. The researcher felt these factors were applicable to many courses and were not unique to the social studies methods course.

Data analysis was completed through a t-test between groups concerning the satisfaction scale responses. The chosen level of significance was the 0.05 probability level. Of these pairings, only one was significant. None of the items on multi-text or cooperative learning showed a significant difference between sections. Since the study attempted to treat both sections the same except for the approach used with selected topics, the finding reflects that effort as being successful. The one item for which there was a significant difference in means between groups concerned feeling ready to teach social studies. The statistic was 0.024 on that item, well below 0.05. This may signal a need for further revision and refining of course materials and the approach.

Findings

It seems appropriate to revisit the three factors this research addressed at this time. Firstly, we need to look at the implementation of MT/CL as a learning approach in a methods

course. This did happen, and resulted in improved material, revision of the presentation of MT/CL. The piloting during 1989-90 resulted in a great deal of material being generated. Some worked very well, others proved relatively useless, and most were revised and/or used differently during the second (Spring 1990) semester used.

The most helpful materials were: (1) those which provided guidelines and sample ideas, and (2) those which involved student movement (group work). It was found that more class time was needed to introduce and develop the use of the approach with students than was anticipated. The revisions made after the Fall 1989 semester focused on this aspect. It is expected that continued revision of materials and refinement of the approach will be needed as an on-going aspect of implementation.

The researcher's greatest concern is that in some cases students appear to be unwilling to accept responsibility for their learning (they do not like to have to use the library, and to make choices of material - even with the support in the packet and of the instructor). Some indicated it was too time-consuming. My "intuitive" guess is that many students who feel as indicated above are often those who are carrying a heavy load of classes and work, and want more to get through the class with a good grade than they do to learn all they can and to experiment with a variety of approaches. The stress factor can be high in

such students and sometimes their response to "new" things is negative due to stress. Written student comments - part of the course evaluation activities - state this.

The researcher feels that continued improvement of approach and materials must focus on these concerns to help students perceive the validity and usefulness of the MT/CL approach for them and for their future students. The update after Spring 1990 will focus on this aspect of the project. Students do learn through the approach, and it offers many more opportunities for self-development than the traditional lecture or lectures/ discussion formats. The challenge to the researcher is to more specifically identify student concerns/attitudes, and to use that as a basis to improve student acceptance of the MT/CL approach.

Secondly, the cooperative learning aspect of the course was very well accepted by students, especially after students identified questions they had after an introduction to CL. Mrs. Munger returned to our classes for clarification and further discussion of CL. Most students recognized CL as one of many effective ways to structure group work, and felt positive about using it in their future classrooms. Most, however, also felt they needed additional training and experiences before they would feel confident in using it - an attitude viewed as a positive by the researcher.

The level of student interest in the MT and CL aspects of

the course was determined through use of the "satisfaction scale" and written comments provided voluntarily by students. As might be expected from the previous discussion and on the basis of the data analysis, students were more accepting of CL than they were of MT. All students recognized they would need to know something about cooperative learning when the student taught. There was not a similarly motivating perception regarding MT use. This will be the area the researcher will continue to revise and extend to improve student perception of MT as a useful and valid alternative to other means of acquiring knowledge.

Thirdly, the "satisfaction scale" (Likert format) indicated student perception of the experimental approach fairly clearly, though t-tests did not find a significant difference in means. As noted earlier, there is considerable potential for use of CL and MT, in a methods course, but the MT aspect needs more work than the CL aspect.

A final comment regarding the "satisfaction scale" needs to be made before ending this section of this report. In an effort to make the items of the scale clear and unambiguous, some were actually overstrong in stating a position. This undoubtedly affected student responses - pushing them to the extremes of the scale. After the responses of the Spring 1990 class are obtained, these items will be reworded and several additional items added for use with future groups.

For the Future

After the Spring 1990 data is analyzed and added as a supplement to this report, revisions will continue. It is expected the responses from the Spring 1990 classes will be more positive than those of the Fall 1989 classes - a reflection of optimism based on revisions made between semesters, the researcher hopes will not be unwarranted. The researcher expects to use some form of MT and CL over the next few years, and to continue to revise and refine the approach according to student feedback. Data will be collected and analyzed over this period, and it is hoped that over the long term, students will perceive the value of MT and CL as additional appropriate techniques to utilize in their classrooms.

Table 1

Composition of Sample Population by Classification and Sex

Classification	Section 1	Section 2
Junior	3	8
Senior	25	19
Sex		
Female	25	24
Male	3	3

Table 2

Format for Global Education and Multi-Text/Cooperative Learning (MT/CL) Treatment Use with Section One and Section Two

MT/CL	Topic	Traditional
Section One	Global Education	Section Two
Section Two	Career Education	Section One

Table 3

Global Education Pre and Post Test Scores for Section One and Section Two (Objective Test)

	Section One		Section Two	
	Value	Frequency	Value	Frequency
Objective Pretest	3	1	3	1
	4	4	4	8
	5	4	5	3
	6	9	6	8
	7	4	7	4
	8	5	8	2
	Mean = 5.963		Mean = 5.462	
Objective Posttest	-	-	4	1
	-	-	5	1
	6	3	6	1
	7	5	7	7
	8	12	8	-
	9	2	9	8
	Mean = 7.926		Mean = 7.577	

Note. N = 27 for Section One and 26 for Section Two. One case per section is missing due to incomplete data.

Note. Total possible points = 10.

Table 4

Career Education Pre and Post Test Scores for Section One and Section Two (Objective Test)

	Section One		Section Two	
	Value	Frequency	Value	Frequency
Objective Pretest			1	1
			2	2
	3	5	3	6
	4	6	4	9
	5	10	5	3
	6	5	6	
	7	1	7	4
			8	1
	Mean = 4.667		Mean = 4.077	
Objective Posttest	4	3		
	5	8	5	7
	6	12	6	11
	7	4	7	8
	Mean = 5.630		Mean = 6.038	

Note. N = 27 for Section One and 26 for Section 2. One case per section is missing due to incomplete data.

Note. Total possible points = 7.

Table 5

Global Education and Career Education Short Answer Test Results

	Global Education				Career Education			
	Section One		Section Two		Section One		Section Two	
	Value	Frequency	Value	Frequency	Value	Frequency	Value	Frequency
Short	0	8	0	2	0	2	0	1
Answer	1	7	1	5	1	7	1	5
Pretest	2		2		2		2	
	3	10	3	16	3	16	3	18
	4		4		4		4	1
	5	2	5	3	5	2	5	1
	Mean=1.741		Mean=2 615		Mean=2.401		Mean=2.615	
	N=27		N=26		N=27		N=26	
Short	0		0		0		0	
Answer	1		1		1		1	
Posttest	2		2		2		2	

Table 5 continued.

Global Education				Career Education			
Section One		Section Two		Section One		Section Two	
Value	Frequency	Value	Frequency	Value	Frequency	Value	Frequency
3	3	3	5	3	4	3	1
4	2	4	4	4	15	4	15
5	22	5	7	5	8	5	20
Mean=4.704		Mean=4 462		Mean=4.148		Mean=4.346	
N=27		N=26		N=27		N=26	

Note. The total number of points possible for this test is 5.

Table 6

Pre and Post Test Values, Frequencies and Means for Section One and Section Two on Cooperative Learning Topic

	Section One		Section Two	
	Value	Frequency	Value	Frequency
Pretest:	3	1	3	1
Cooperative Learning	7	5	4	1
	11	2	5	2
	13	4	7	4
	14	1	9	4
	15	8	11	1
	17	3	12	1
	19	2	13	2
	21	2	15	6
			17	1
			19	3
			21	1
	Mean = 13.464		Mean = 11.667	
	N = 28		N = 27	
Posttest:	18	1	15	1
Cooperative	19	1	19	3
Learning	21	2	21	3

Table 6 continued.

	Section One		Section Two	
	Value	Frequency	Value	Frequency
	22	1	22	3
	23	7	23	5
	24	2	24	4
	25	14	25	8
	Mean = 23.571		Mean = 22.661	
	N = 28		N = 27	

Note. The total number of points possible in this test is 25.

Table 7

Means of Pre and Post Test Scores for Combined Sections (One and Two) for Global Education, Career Education and Cooperative Learning Topics

	Pretest Mean	Posttest Mean
Global Education Objective Test 10 pt. N=53	5.717	7.755
Career Education Objective Test 7 pt. N=53	4.377	5.830
Global Education Short Answer Test 5 pt. N=53	2.170	4.585
Career Education Short Answer Test 5 pt. N=53	2.509	4.245
Cooperative Learning Test 25 pt. N=53	12.582	23.127

Table 8

Comparison of Means using Paired T-Tests to Determine the Significance of Gains in Mean Scores for Pre-and Post Tests ($p<.05$)

Test	Mean	Probability	Significant
Global Education Objective Posttest	7.7547		
		0.000	yes
Global Education Objective Pretest	5.7170		
		0.000	yes
Career Education Objective Posttest	5.8302		
		0.000	yes
Career Education Objective Pretest	4.3774		
Global Education Short Answer Posttest	4.5849		
		0.000	yes
Global Education Short Answer Pretest	2.1692		

Table 8 continued

Test	Mean	Probability	Significant
GCareer Education			
Short Answer Posttest	4.2453		
		0.000	yes
Career Education			
Short Answer Pretest	2.5094		
Cooperative			
Learning Pretest	23.1273		
		0.000	yes
Cooperative			
Learning Posttest	12.5818		

Table 9

A Comparison of Mean Scores on Pre and Post Tests for Section One and Section Two when Sections are Considered Separately

	Mean		Probability[6]		Significant	
	Sec. 1	Sec. 2	Sec. 1	Sec. 2	Sec. 1	Sec. 2
Global Education[1]						
Objective						
Posttest	7.9259+	7.5769#				
Global Education			0.000	0.000	yes	yes
Objective Pretest	5.9630	5.4615				
Career Education[2]						
Objective						
Posttest	6.6296#	6.0385+				
Career Education			0.000	0.000	yes	yes
Objective Pretest	4.6667	4.0769				
Global Education[3]						
Short Answer						
Posttest	4.7037+	4.4615#				
Global Education			0.000	0.000	yes	yes
Short Answer						
Pretest	1.7407	2.6154				

Table 9 continued

	Mean		Probability[6]		Significant	
	Sec. 1	Sec. 2	Sec. 1	Sec. 2	Sec. 1	Sec. 2
Career Education[4]						
Short Answer						
Posttest	4.1481#	4.3462+				
Career Education			0.000	0.000	yes	yes
Short Answer						
Pretest	2.4074	2.6154				
Cooperative Learning[5]						
Posttest	23.5714	22.6667				
Cooperative Learning			0.000	0.000	yes	yes
Pretest	13.4643	11.6667				

Note:

1. 10 point test
2. 7 point test
3. 5 point test
4. 5 point test
5. 25 point test
6. 0.05 level of significance

Note. N = 55

Table 9 continued

Note. + = MT/CL approach used with section

= traditional lecture/discussion approach used with section

Table 10

Differences Between Means Examined by Teaching Approach Used

Tests	Difference Between Means	
	Section 1	Section 2
Global Education Objective Posttest Global Education Objective Pretest	1.9630+	2.1154
Global Education Short Answer Posttest Global Education Short Answer Pretest	2.9630+	1.9615
Career Education Objective Posttest Career Education Objective Pretest	0.9630	1.8462+
Career Education Short Answer Posttest Career Education Short Answer Pretest	1.7407	1.7308+

Note. + indicates section experienced topic through experimental approach (MT/CL).

Table 11

Item 1. Satisfaction Scale

I learned more about the topics studied by use of multiple texts than I did about the topics I studied in other ways.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	0	0	0
Agree	4	4	8
Neutral	8	9	17
Disagree	10	5	15
Strongly Agree	5	3	8
Mean Rating	3.593	3.333	3.479
Number	27	21	48

Note. The highest rating is 1.

Table 12

Item 2. Satisfaction Scale

I would like to have all topics in this course studied by using multiple texts.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	1	0	1
Agree	0	1	1
Neutral	2	4	6
Disagree	7	10	27
Strongly Disagree	7	6	13
Mean Rating	4.074	4.000	4.042
Number	27	21	48

Note. The highest rating is 1.

Table 13

Item 3. Satisfaction Scale

I feel competent to use a multiple text approach in my classroom as a result of experiencing it in this class.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	2	1	3
Agree	2	3	5
Neutral	10	9	19
Disagree	9	4	13
Strongly Disagree	4	4	8
Mean Rating	3.407	3.333	3.375
Number	27	21	48

Note. The highest rating is 1.

Table 14

Item 4. Satisfaction Scale

The presentation of cooperative learning as an approach to learning in the elementary classroom provided the information I need to understand this way of teaching/learning for elementary students.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	8	5	13
Agree	17	11	28
Neutral	2	4	6
Disagree	0	1	1
Strongly Disagree	0	0	0
Mean Rating	1.778	2.048	1.896
Number	27	21	28

Note. The highest rating is 1.

Table 15

Item 5. Satisfaction Scale

I feel competent to use cooperative learning in my classroom as a result of trying it out in this class.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	3	5	8
Agree	17	9	26
Neutral	5	6	11
Disagree	1	0	1
Strongly Disagree	1	1	2
Mean Rating	2.259	2.190	2.229
Number	27	21	48

Note. The highest rating is 1.

Table 16

Item 6. Satisfaction Scale

This class has helped me to feel I am ready to teach social studies in the elementary school.

Rating	Frequencies		
	Section 1	Section 2	Combined Sections
Strongly Agree	4	2	6
Agree	18	8	26
Neutral	4	6	10
Disagree	0	3	3
Strongly Disagree	1	2	3
Mean Rating	2.111	2.762	2.396
Number	27	21	48

Note. The highest rating is 1.

Extension of: Using a Multi-text/Cooperative Learning Approach in a Methods Course

Joan C. Breiter

Iowa State University

Running head: Multi-text Cooperative Learning Approach

Part II

Extension of: Using A Multi-Test/Cooperative Learning Approach in a Methods Course

What the Future Brought

As a result of the Fall 1989 MT/CL experience with students, the following changes in the approach were made.

1. Two, rather than three, sources were required for each multi-text topic.
2. Students handed in their multi-text notes and/or xeroxed material for evaluation and feedback on the day the first MT topic was presented in class. Specific feedback on both mechanics and content was provided for each student. An overall review of the process was provided in class. Some students chose to meet with the instructor on a one-to-one basis.
3. Stronger encouragement to include articles from social science periodicals as one of the two sources required was given by the instructor.
4. Several MT topics were explored by the students through in-class discussion groups, using their notes from the sources they chose to guide the discussion and to effect an exchange of information and viewpoints.

Basically, no changes were made in the cooperative learning experience. Mrs. Munger presented an awareness session, the instructor did follow-up, Mrs. Munger returned to discuss the concerns about CL the students had expressed to the instructor, and several

variations/adaptations of CL group work were utilized during the semester.

At the end of Spring Semester, 1990, students were again asked to express their feelings about the multi-text approach, cooperative learning, and how well they felt prepared to teach elementary social studies. (At this point, the reader may wish to refer to pp 17-19* for a description of the instrument and its items and to pp 17-19* for a report of how students responded to the six questions on the "satisfaction scale."

Student Response to MT/CL - Spring 1990

Two groups of students (those enrolled in El.Ed 443, Sections 1 and 3, Spring 1990) comprised the sample population exposed to the revised (as described above) version of the MT/CL approach used. Each of the two groups consisted of 25 students. (The Fall 1989 groups were 27 and 21 students respectively.)

In order to avoid confusion which comparing the satisfaction level of the Spring 1990 groups to that of the Fall 1989 groups, the population groups were relabeled as follows. The Fall Groups were numbered on Group 1 and Group 2. The Spring Groups were referred to as Group 3 and Group 4.

As the reader may remember, the first three items on the Likert-Style "Satisfaction" instrument refer to student level of satisfaction with the multi-text (MT) approach.

Insert Table 17 about here

---

* See report of Fall 1989 analysis (Part I) for this information.

Table 17 indicates a more positive attitude toward the use of multi-texts by Group 4 than that expressed by Group 3. Similarly, Group 4 also was more positive about studying all of the course topics using this approach then was Group 3.

Insert Table 18 about here

Item 3 asked students to rate their own feelings of competency to use a MT approach in an elementary classroom. Again, Group 4 was more positive about their ability to do this than was Group 3. Table 19 indicates the frequencies for this item.

Items 4 and 5 of the Satisfaction Scale considered the level of understanding of how cooperative learning "works" and the felt competency level of these future teachers to use it in their classrooms.

As Tables 20 and 21 indicate, the level of understanding and competency as seen through the self-rating by the students indicate a high level of satisfaction in the area of cooperative learning.

Insert Table 20 about here

Insert Table 21 about here

The final item on the Scale dealt with overall satisfaction with

the social studies methods course needs to be expanded by looking at all four of the sample population groups.

Comparison of Responses to the Satisfaction Scale Items for Fall 1989 and Spring 1990 Population

Ratings were relatively poor in both areas for Groups 1 and 2, who were the first groups to experience the approach and the materials used.

Changes were made as a result of the Fall term student feedback, and the rating by the Spring 1990 term people were, generally, higher than those of the Fall term. Students were still not feeling positive about using multiple texts, but the mean rating on Item 1 for combined groups 3 and 4 was 2.88* while that for groups 1 and 2 had been 3.479. (One should note, however, that the change in mean ratings for Item 1 was highly influenced by Group 4 who rated this item far more positively than did Group 3). Mean ratings by the Fall Groups on Item 2 were 4.042, while the ratings of the Spring groups were 3.440. Similarly the Fall Groups ratings of Item 3 were 3.375 while the Spring groups were 2.780. It would seem the change made in the multiple text (MT) facet of the course helped to make it more palatable/acceptable to students, but that more adjustment will be needed before students view it as a clearly positive and viable way of teaching/learning.

---

*note: A rating of 1.000 was high (strongly agree), while a rating of 5.000 was low (strongly disagree).

The differences in mean ratings for Items 4 and 5 of the Satisfaction Scale, which dealt with cooperative learning (CL), show a smaller "gain" between Fall and Spring groups than did the MT items. Since CL was initially much more positively received than was MT, a smaller difference was not unexpected. The mean rating for item 4 was 1.896 in the Fall and 1.680 in the Spring, indicating a strong level of satisfaction with the material presented. Item 5, dealing with student feelings of competency to use CL themselves, received a mean rating of 2.229 in the Fall and 1.860 in the spring. This, too, indicates an acceptably strong level of satisfaction with the portion of the methods course dealing with cooperative learning.

The final item on the Scale (Item 6) referred to how ready students felt to teach elementary social studies after completing the methods course. The Fall Group's combined mean rating was 2.396 while the Spring groups combined mean rating was 2.220. This, in both groups, methods course was perceived as satisfactory as preparation for classroom teaching.

While the Spring frequency data indicated a more positive student attitude toward MT/CL was attained after changes based on feedback from the first groups of students to experience the approach were made, this data does not indicate if the observed mean differences were significant at the chosen level (0.05 level of probability). Once again a t-test was used to determine significant and non-significant differences.

The t-tests were used to compare the response of the Fall 1989

population (Groups 1 and 2, N=48) with the Spring 1990 population (Groups 3 and 4, N=50). Table 23 indicates this comparison identifying the Fall population as Group 1 and the Spring population as Group 2.

Insert Table 23 about here

The differences between the means for Group 1 and Group 2 were significant for four of the six items on the Satisfaction Scale. Three of the four items for which a significant difference was found were concerned with the multiple-text (MT) approach (Items 1, 2, 3). It would appear that the more positive viewpoint of the Spring group toward MT is other than by chance. The Fall group mean rating indicated negativism between neutral and disagree, while the Spring group fell between agree and neutral. The researcher will continue to revise and refine the MT component of the methods course on the basis of student feedback and will report further after the Fall 1990 term using data collected Summer and Fall 1990 terms.

The fourth item for which there was a significant difference between mean was that dealing with felt level of competency to use cooperative learning as a teaching/learning approach (Item 5). In this case, the reported mean rating moved from between agree and neutral to between strongly agree and agree. No major changes in this part of the course are currently being planned.

Those items on the Satisfaction Scale for which no significant

difference between the means of the groups were found were numbers 4 and 6. The level of understanding of cooperative learning was similar for both groups. Since the presentation of CL was done similarly, by the same person, with no major change from the first semester to the second semester, this result is not unexpected.

The overall satisfaction level with the course as preparation for teaching social studies was also similar between groups. Since the course consists of many more facets than MT/CL, this finding is also not unexpected, and provides a certain amount of reassurance to the researcher that use of this experimental approach is not adversely affecting student perception that the course is meeting their needs as preservice teachers.

A final analysis of the data utilized a one-way analysis of variance to compare each class group (1 and 2 from Fall 1989 and 3 and 4 from Spring 1990) with the three other class groups to determine whether any group was significantly different from the others when each was compared separately. Once again, the 95 percent confidence interval (0.05) for means was used to determine significance or non significance of differences between means.

Data will be reported for each Satisfaction Scale item as follows:

1. The contrast patterns utilized will be described.
2. The mean and F probability statistic will be indicated.
3. The results of the test for homogeneity of variance will be provided.

4. The results of the multiple range test will be provided.

5. The conclusions drawn will be noted and discussed.

Insert Figure 1 about here

Contrast 1 compared to Group 1 to the other three groups combined. Contrast 2 compared Group 2 to the combination of the other three groups, etc. These contrasts were provided for each of the six items on the Satisfaction Scale. A variance estimate and a multiple range test indicated which group or groups were significantly different from the others. The results of this analysis of variance follow.

Question one of the Satisfaction Scale (SS) considered whether students felt they learned more about the topics which were designated as MT topics than they did about non-MT topics.

Question one of the Satisfaction Scale (SS) considered whether students felt they learned more about the topics which were designated as MT topics than they did about non-MT topics.

The analysis of variance procedure indicated the test for the probability of a significant difference between means occurring at the 0.05 level was met not only by Item 1, but also by Items 2 and 3. These were the SS items dealing with the use of multiple texts in a social studies methods course. Item 2 considered student liking for the approach and item 3 how competent students felt to use the MT approach in their future classrooms.

Analysis of variance did not find a significant difference for Item 5 (feeling competent to use cooperative learning in their future classroom), as did earlier T-tests discussed on pp 6-8. Also, no significant difference between means was found for Items 4 and 6.

Table 24 contains data associated with the above discussion.

Insert Table 24 about here

Test using the Contrast Coefficient Matrix shown in Figure 1 (see p 24) yielded both a variance estimate and a range test comparison of groups. Table 25 details the T probability level for each contrast for each item on the SS, and notes when the comparison indicates there were one or more pairs of groups that were significantly different at the 0.005 level.

Insert Table 25 about here

Once again, the items dealing with the multiple text approach were those for which a significant difference (0.05 level) between means was shown. In each of these three cases, Group 4 was significantly difference in their responses to the other three groups combined. This group, when considered separately, seemed to be the major reason for the significant difference between the Fall 1989 and Spring 1990 populations. The researcher has no idea why this group felt differently than the others. Each of the Spring 1990 groups had

the same requirements, same instructor, same basic approach, etc. Table 25 provides the statistical information for the above discussion.

Conclusions

As a result of the experimentation and revision to date, the researcher presents the following conclusion.

1. Overall, the social studies methods course is adequately meeting the needs of preservice elementary teachers. The researcher, however, feels there are feasible areas for improvement.
2. The use of cooperative learning was successful as presented. It could be practiced out of class more if the students had more flexible schedules. This would be desirable to increase students feeling of being competent to use the approach.
3. More work on presenting MT as a teaching-learning approach is needed to result in student perception of the approach as useful and valuable.

Thoughts for 1990-1991

The researcher will continue to revise and refine the MT approach. The summer 1990 social studies methods students are/were piloting an adaptation of the approach. The form of the MT approach (or, Personal Text, as it is now called) allows more student flexibility. The wide variety of texts previously used is still on reserve at the Parks Library. Students are still provided with a Starter Readings Chart. The change focuses on the depth the student

elects for each topic.

The minimum the student may elect is to read one text on the topic of the day. The student is to take handwritten notes, or copy and annotate the selected material, or use a combination of hand notes and copied material. Full credit for this would be 1/1 point. Less than one point may be earned if the material does not reflect a thorough exploration of the selected material, submission of inappropriate material (off-topic), or, otherwise does not meet standards discussed in class.

If the student wishes, he/she may also elect to do one or both of the following.

Each of these options has a topic value of 1/1. These options are available for each MT topic.

1. The student may locate, read, and report on a topic-appropriate article from a recent social science publication.
2. The student may collect and report on a minimum of three (3) activities which could be adapted for use with several ages of students (K-6).

As the reader may note, there is a change in how multiple texts are now used. Initially, multiple texts involved students reading from several texts on a topic. Currently, the multiple text aspect is to select from a list of texts, and students are strongly encouraged to explore periodicals in addition to the texts they select. More frequent discussions by small groups, using their texts notes are

utilized.

Should the above variation of the MT prove to be positively perceived by the Summer 1990 group, it will be used that way during Fall 1990 with the two sections of the methods course taught by the researcher. If not, further revision will occur based on student feedback. At the end of Fall 1990 a final evaluation of the MT approach will be made and a decision whether to continue their approach beyond the 1990-91 academic year will result.

Should the researcher feel it necessary to return to one required text (a security blanket for students), some elements of the MT approach will be retained in the form of required readings, options, and small group activities.

Table 17

Item 1. Satisfaction Scale

I learned more about the topics studied by use of multiple texts than I did about the topics I studied in other ways.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	0	5	5
Agree	6	12	18
Neutral	5	5	10
Disagree	9	3	12
Strongly Disagree	5	0	5
Mean Rating	3.520	2.240	2.880
Number	25	25	50

Note. The highest rating is 1.

Table 18

Item 2. Satisfaction Scale

I would like to have all topics in this course studied by using multiple texts.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	1	3	4
Agree	1	5	6
Neutral	4	7	11
Disagree	13	9	22
Strongly Disagree	6	1	7
Mean Rating	3.880	3.000	3.440
Number	25	25	50

Note. The highest rating is 1.

Table 19

Item 3. Satisfaction Scale

I feel competent to use a multiple text approach in my classroom as a result of experiencing it in class.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	1	3	4
Agree	10	13	23
Neutral	5	4	9
Disagree	4	4	8
Strongly Disagree	5	1	6
Mean Rating	3.080	2.480	2.780
Number	25	25	25

Note. The highest rating is 1.

Table 20

Item 4. Satisfaction Scale

The presentation of cooperative learning as an approach to learning in the elementary classroom provided the information I need to understand this way of teaching/learning for elementary students.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	8	14	22
Agree	14	9	23
Neutral	2	2	4
Disagree	1	0	1
Strongly Disagree	0	0	0
Mean Rating	1.840	1.520	1.680
Number	25	25	50

Note. The highest rating is 1.

Table 21

Item 5. Satisfaction Scale

I feel competent to use cooperative learning in my classroom as a result of trying it out in this class.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	6	10	16
Agree	16	11	27
Neutral	2	3	5
Disagree	1	1	2
Strongly Disagree	0	0	0
Mean Rating	1.920	1.800	1.860
Number	25	25	50

Note. The highest rating is 1.

Table 22

Item 6. Satisfaction Scale

This class has helped me to feel I am ready to teach social studies in the elementary school.

	Frequencies		
Rating	Group 3	Group 4	Combined Section
Strongly Agree	3	3	6
Agree	15	15	30
Neutral	5	6	11
Disagree	2	1	3
Strongly Disagree	0	0	0
Mean Rating	2.240	2.200	2.220
Number	25	25	50

Note. The highest rating is 1.

Table 23

Comparison of Fall 1989 and Fall 1990 Mean Differences in Ratings on the Items of the Satisfaction Scale.

Item	Group	Number	Mean	Probability Level+	Significant
1	1*	48	3.4792	0.008	yes
	2**	50	2.8800		
2	1	48	4.0417	0.003	yes
	2	50	3.4400		
3	1	48	3.3750	0.011	yes
	2	50	2.7800		
4	1	48	1.8958	0.132	no
	2	50	1.6800		
5	1	48	2.2292	0.031	yes
	2	50	1.8600		
6	1	48	2.3958	0.328	no
	2	50	2.2200		

* Fall 1989, 2 classes combined

** Spring 1990, 2 classes combined

\+ 0.05 level of probability needed for the differences to be considered significant

Table 24

Mean, Standard Deviation and F probability for Groups 1-4 on Items 1-6 of the Satisfaction Scale (SS)

	Analysis of Variance		
Item Number	Mean	SE	F probability*
Item 1			
Group 1	3.5926	.9711	
Group 2	3.3333	.9611	0.0000
Group 3	3.5200	1.0847	
Group 4	2.2400	.9256	
Item 2			
Group 1	4.0741	.8286	
Group 2	4.0000	.8367	0.0003
Group 3	3.8800	.9713	
Group 4	3.0000	1.1180	
Item 3			
Group 1	3.4074	1.0834	
Group 2	3.3333	1.1106	0.0190
Group 3	3.0800	1.2557	
Group 4	2.4800	1.0456	
Item 4			
Group 1	1.7778	.5774	

Table 24 continued

Group 2	1.7778	.5774	0.0851
Group 3	1.8400	.7461	
Group 4	1.5200	.6532	
Item 5			
Group 1	2.2593	.8590	
Group 2	2.1905	.9808	.1745
Group 3	1.9200	.7024	
Group 4	1.8000	.8165	
Item 6			
Group 1	2.1111	.8006	
Group 2	2.7619	1.1360	.0551
Group 3	2.2400	.7789	
Group 4	2.3061	.7071	

*0.05 level of probability used

Table 25

T-probability Value and Range test of significantly different group responses for Items 1-6 of the Satisfaction Scale (SS)

Satisfaction Scale Item #	T probability level for: Contrast 1	Contrast 2	Contrast 3	Contrast 4	Range tests: Significant group contrasts at the 0.05 level when comparisons made separately
1	0.014	0.378	0.046	0.000	Group 4 significantly different from Groups 1, 2, 3
2	0.040	0.139	0.393	0.000	Group 4 significantly different from Groups 1, 2, 3
3	0.086	0.218	0.980	0.003	Group 4 significantly different from Groups 1, 2, 3
4	0.875	0.053	0.718	0.024	no two Groups significantly different
5	0.131	0.342	0.404	0.100	no two Groups significantly different
6	0.139	0.007	0.555	0.392	no two Groups significantly different

Figure 1

Contrast Coefficient Matrix

	Groups			
Contrasts	1	2	3	4
Contrast 1	-3.0	1.0	1.0	1.0
Contrast 2	1.0	-3.0	1.0	1.0
Contrast 3	1.0	1.0	-3.0	1.0
Contrast 4	1.0	1.0	1.0	-3.0

Appendix A for

Part I and Part II

Satisfaction Scale (SS)

Respond to use of multiple texts and cooperative learning in El Ed 443

Directions:

Please place the number which most closely reflects your feelings about each statement in the box at the end of the statement.

1. I learned more about the topic(s) studied by use of multiple texts than I did about the topics I studied in other ways.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comment:

2. I would like to have all topics in this course studied by using multiple texts.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comments:

3. I feel competent to use a multiple text approach in my classroom as a result of experiencing it in this class.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comments:

4. The presentation of cooperative learning as an approach to learning in the elementary classroom provided the information I need to understand this way of teaching/learning for elementary students.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comments:

5. I feel competent to use cooperative learning in my classroom as a result of trying it out in this class

---

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comments:

6. This class has helped me to feel I am ready to teach social studies in the elementary school.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Comments:

Please write your thoughts about multiple text use, cooperative learning, and/or any other aspect of this course which you feel would be helpful to the instructor in making positive changes in the course.

Thank you.

Appendix B for

Part I and Part II

El. Ed. 443

Pretest: Cooperative Learning

Directions:

Please answer the following questions to the best of your ability.

1. Define "cooperative learning" as a learning approach.

2. With whom is the use of cooperative learning appropriate?

3. What responsibilities do teachers have when using cooperative learning with a class?

4. What advantages for students result when cooperative learning is used?

5. Why is cooperative learning a sink or swim learning method for students?